

CLAIMS

1. An image processing method comprising:

a detection step of detecting a correspondence between one color of a first plurality of colors in a first image and one color of a second plurality of colors in a second image; and

a correction step of correcting said first plurality of colors or said second plurality of colors in accordance with said correspondence.

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2. The image processing method according to claim 1, wherein said detection step comprises detecting a plurality of correspondences between a first plurality of feature colors and a second plurality of feature colors by extracting said first plurality of feature colors featuring said first image from said first image and extracting said second plurality of feature colors featuring said second image from said second image.

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3. The image processing method according to claim 2, wherein said detection step comprises making a first decision of deciding said first plurality of feature colors in accordance with the extent of appearance of said first plurality of colors, and making a second decision of deciding said second plurality of feature colors in accordance with the extent of appearance of said second plurality of colors.

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4. The image processing method according to claim 3, wherein said detection step comprises making said first decision in accordance with the extent of appearance of a third plurality of colors over a predetermined extent of appearance among said first plurality of colors, and making said second decision in accordance with the extent of appearance of a fourth plurality of colors over a predetermined extent of appearance among said second plurality of colors.
- 10 5. The image processing method according to claim 3, wherein said detection step comprises detecting said plurality of correspondences so that a sum of color differences between feature colors corresponding to each other may be minimized for possible combinations of said first plurality of feature colors and said second plurality of feature colors.
- 15 6. The image processing method according to claim 5, wherein said detection step comprises weighting said color differences and said extents of appearance, and calculating a weighted sum of color differences and a weighted sum of extents of appearance.
- 20 7. The image processing method according to claim 2, wherein said detection step comprises detecting said plurality of correspondences by pattern matching of the color histogram.
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8. The image processing method according to claim 1, wherein said correction step comprises correcting the other colors with reference to one of said first plurality of colors and said second plurality of colors.

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9. The image processing method according to claim 1, wherein said correction step comprises correcting at least one of hue, saturation and lightness based on a color specification system of hue, saturation and lightness.

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10. The image processing method according to claim 2, wherein said detection step comprises extracting said feature colors based on a predetermined domain, or a domain specified by the user.

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11. An image processing apparatus comprising:

a detection part of detecting a correspondence between one color of a first plurality of colors in a first image and one color of a second plurality of colors in a second image; and

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a correction part of correcting said first plurality of colors or said second plurality of colors in accordance with said correspondence.

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12. The image processing apparatus according to claim 11, further comprising a first input part for inputting said first image, and a second input part for inputting said second image.

13. The image processing apparatus according to claim 12,
wherein said first input part is one of a scanner and a digital
camera, and said second input part is the other of said scanner
5 and said digital camera.

14. The image processing apparatus according to claim 11,
wherein said correction part corrects the other colors with
reference to one of said first plurality of colors and said
10 second plurality of colors.

15. The image processing apparatus according to claim 11,
wherein said correction part corrects at least one of said
hue, said saturation and said lightness based on a color
15 specification system of hue, saturation and lightness.

16. The image processing apparatus according to claim 11,
wherein said detection part extracts said feature colors based
on a predetermined range or a range specified by the user.
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17. An image processing program for enabling a computer to
perform an image processing, said computer having a detection
part and a correction part which cooperate to perform the
image processing, said program comprising:
25 a detection step of causing said detection part to detect
a correspondence between one color of a first plurality of

colors in a first image and one color of a second plurality of colors in a second image; and

a correction step of causing said correction part to correct said first plurality of colors or said second plurality of colors in accordance with said correspondence.

18. A computer readable storage medium storing an image processing program for enabling a computer to perform an image processing, said computer having a detection part and a correction part which cooperate to perform the image processing, said program comprising:

a detection step of causing said detection part to detect a correspondence between one color of a first plurality of colors in a first image and one color of a second plurality of colors in a second image; and

a correction step of causing said correction part to correct said first plurality of colors or said second plurality of colors in accordance with said correspondence.

19. An image processing method comprising:

a specification step of specifying the color in each of two images; and

a correction step of correcting the other color in one image in accordance with the relationship between said both colors.

20. An image processing method comprising:

a first specification step of specifying one first domain in a first image capable of specifying a plurality of first domains each having the domain representative color information indicating the representative color of domain;

5 a second specification step of specifying one second domain in a second image capable of specifying a plurality of second domains each having the domain representative color information, said second image corresponding to said first image;

10 a correspondence step of associating said specified one first domain and said specified one second domain; and

a correction step of correcting the image color information indicating the color of said second image in accordance with the relationship between the domain
15 representative color information of said one first domain and the domain representative color information of said one second domain which are associated.

21. The image processing method according to claim 20,
20 wherein said second specification step comprises specifying two or more second domains, and said correction step comprises correcting said image color information in accordance with the relationship between the position of each of said second plurality of domains and the position of each of said two
25 or more second domains.

22. The image processing method according to claim 20,
wherein said first specification step comprises specifying
two or more first domains, said second specification step
comprises specifying two or more second domains, and said
5 correction step comprises correcting said image color
information by different correction methods each depending
on the number of correspondences between said two or more
first domains and said two or more second domains.

10 23. The image processing method according to claim 20,
further comprising a definition step of defining said domain
representative color information of said domain in terms of
the small domain representative color information indicating
the representative colors of small domains contained in said
15 domain.

24. The image processing method according to claim 23,
wherein said definition step comprises defining the domain
representative color information of said domain in terms of
20 a plurality of small domain representative color information
indicating the representative colors of a plurality of small
domains contained in said domain.

25. The image processing method according to claim 23,
25 wherein said definition step comprises defining the domain
representative color information of said domain in terms of
the small domain representative color information indicating

the color having the highest percentage of area occupied in said domain among said plurality of small domain representative color information.

5 26. The image processing method according to claim 23, wherein said definition step comprises defining the domain representative color information of said domain in terms of the small domain representative color information indicating the color in which the percentage of area occupied in said domain is greater than or equal to a predetermined rate among
10 said plural pieces of small domain representative color information.

27. The image processing method according to claim 20,
15 wherein at least one of said first specification step and said second specification step comprises specifying a neighboring domain near said one domain specified by said one specification step, and said definition step comprises defining the domain representative color information of said
20 one domain in terms of the neighboring domain representative color information indicating the representative color of both said one domain and said neighboring domain.

28. The image processing method according to claim 20,
25 wherein at least one of said first specification step and said second specification step comprises specifying an equivalent domain represented by the color substantially

equivalent to the representative color of said one domain specified by said one specification step, and said definition step comprises defining the domain representative color information of said one domain in terms of the equivalent domain representative color information indicating the representative color of both said one domain and said equivalent domain.

29. The image processing method according to claim 20, wherein at least one of said first specification step and said second specification step comprises specifying said one domain by any drawing.

30. An image processing apparatus for performing an image processing for a first image capable of specifying a plurality of first domains each having the domain representative color information indicating the representative color of the domain and a second image capable of specifying a plurality of second domains each having the domain representative color information, comprising:

 a first specification part for specifying one first domain;

 a second specification part for specifying one second domain; and

 a correction part for correcting the image color information indicating the color of each of said plurality of second images in accordance with the relationship between

the domain representative color information of said one first domain and the domain representative color information of said one second domain.

- 5 31. An image processing program for enabling a computer to perform an image processing, said computer having a specification part and a correction part which cooperate to perform the image processing, in a second image corresponding to a first image capable of specifying a plurality of first
10 domains each having the domain representative color information indicating the representative color of the domain, said second image capable of specifying a plurality of second domains each having the domain representative color information, said program comprising:
- 15 a specification step of specifying one second domain;
and
a correction step of correcting the image color information indicating the color of said second image in accordance with the relationship between the domain
20 representative color information of said one second domain and the domain representative color information of one first domain corresponding to said one second domain.

32. An image processing program for enabling a computer to
25 perform an image processing, said computer having a first input part, a second input part of which the color characteristic is different from that of said first input

part, a decision part, a first specification part, a second specification part and a correction part which cooperate to perform the image processing between a first image capable of specifying a plurality of first domains each having the domain representative color information indicating the
5 domain representative color of the domain and a second image capable of specifying a plurality of second domains each having the domain representative color information, said program comprising:

10 a first specification step of causing said first specification part to specify one first domain;

a second specification step of causing said second specification part to specify one second domain; and

a correction step of causing said correction part to
15 correct the image color information indicating the color of said second image in accordance with the relationship between the domain representative color information of said one first domain and the domain representative color information of said one second domain.

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33. A computer readable storage medium storing an image processing program for enabling a computer to perform an image processing, said computer having a specification part and a correction part which cooperate to perform the image
25 processing, in a second image corresponding to a first image capable of specifying a plurality of first domains each having the domain representative color information indicating the

representative color of the domain, said second image capable of specifying a plurality of second domains each having the domain representative color information, said program comprising:

5 a specification step of specifying one second domain;
and

 a correction step of correcting the image color information indicating the color of said second image in accordance with the relationship between the domain
10 representative color information of said one second domain and the domain representative color information of one first domain corresponding to said one second domain.

34. A computer readable storage medium storing an image
15 processing program for enabling a computer to perform an image processing, said computer having a first input part, a second input part of which the color characteristic is different from that of said first input part, a decision part, a first specification part, a second specification part and a
20 correction part which cooperate to perform the image processing between a first image capable of specifying a plurality of first domains each having the domain representative color information indicating the representative color of the domain and a second image capable
25 of specifying a plurality of second domains each having the domain representative color information, said program comprising:

a first specification step of causing said first specification part to specify one first domain;

a second specification step of causing said second specification part to specify one second domain; and

5 a correction step of causing said correction part to correct the image color information indicating the color of said second image in accordance with the relationship between the domain representative color information of said one first domain and the domain representative color information of
10 said one second domain.